

ABSTRACT OF THE DISCLOSURE

Systems and methods are described for the manufacture and use of a dual-purpose array for ultrasound imaging. In one configuration, the array is useful as an array for normal imaging. This array can be designed as a 1.x-D (1.0, 1.25, 1.5, 1.75, etc.) array. In another configuration, the array is useful as a square annular array. While the principle architecture envisioned is a square ring, a rectangular ring or other approximation to a circular ring can be used when more rows and more complicated interconnects are used. In particular, when two annular arrays of different geometry are enabled, the attenuation compensated volume flow meter (ACVF) uniform method for measuring volume flow rate can be applied at desired time in a cardiac cycle. The systems and methods provide advantages because the array may be used for normal imaging in other applications, and still enable volume flow rate measurements. It allows the estimation of the volume flow rate and its other derivatives as an integral part of daily clinical workflow.